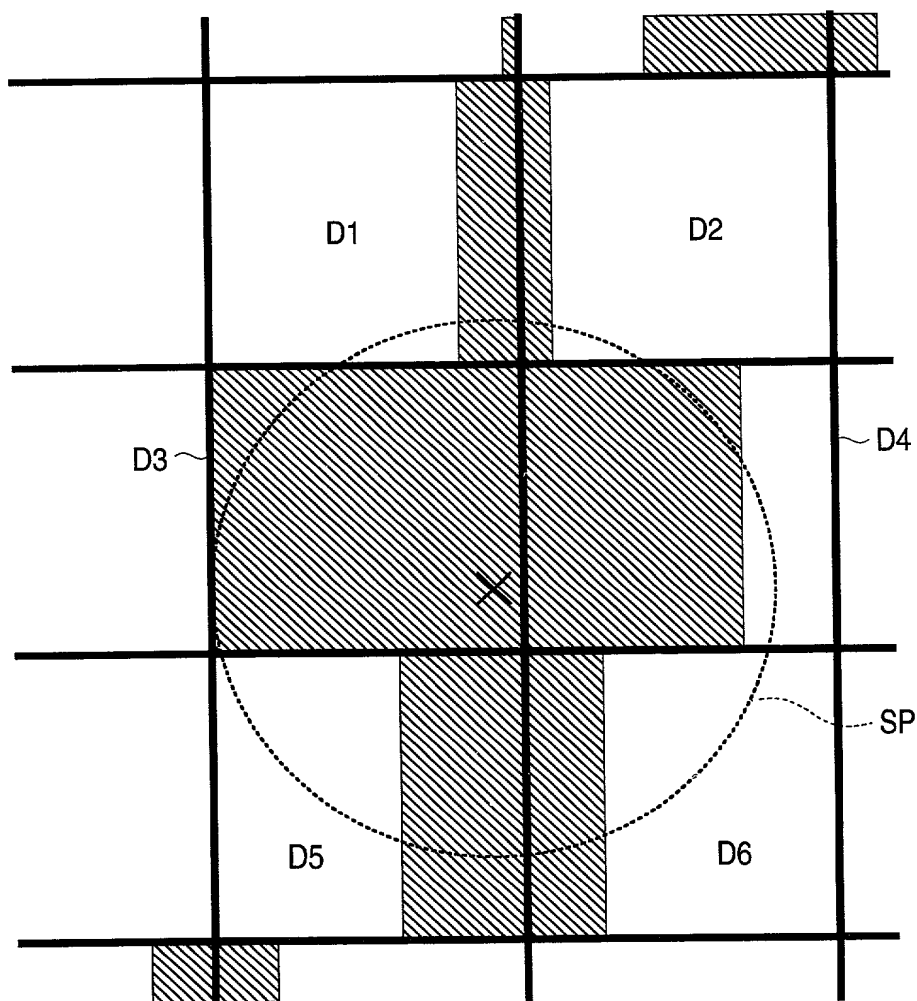


FIG. 1

EXAMPLE OF HALFTONE SPOT



(1) HALFTONE SPOT SHAPE

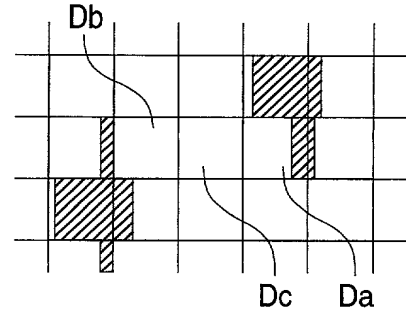
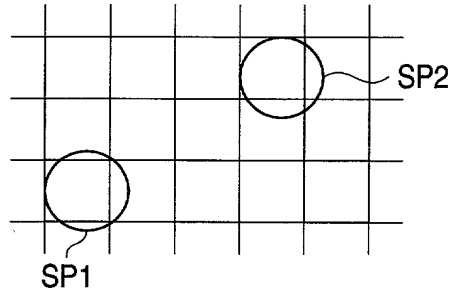
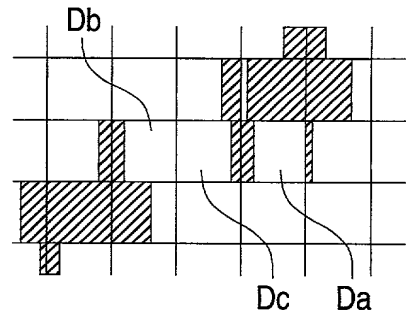
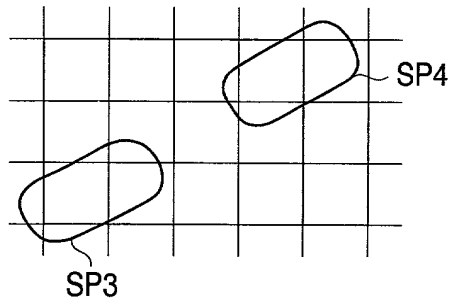
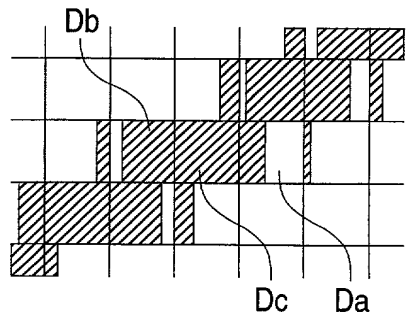
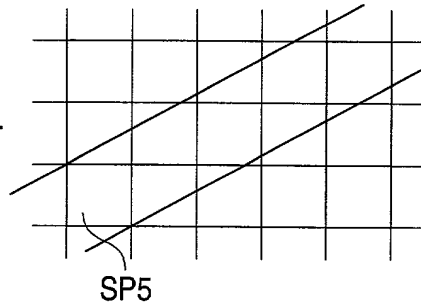
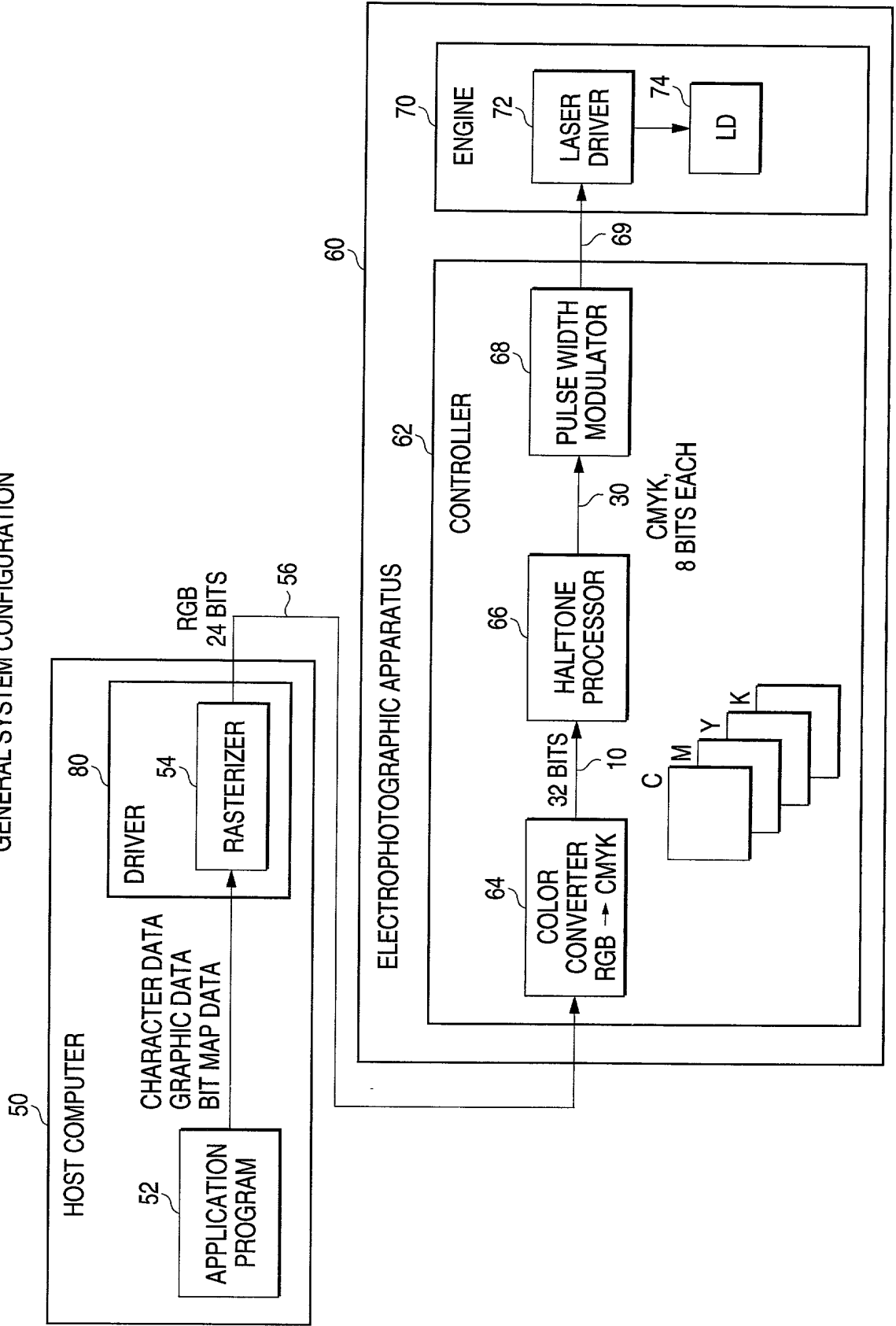
(2) VIRTUAL DOT TO OBTAIN
HALFTONE SPOT SHAPE**FIG. 2 (A)**
LOW GRAY LEVEL**FIG. 2 (B)**
INTERMEDIATE
GRAY LEVEL**FIG. 2 (C)**
HIGH GRAY LEVEL

FIG. 3

GENERAL SYSTEM CONFIGURATION



TRANSFORMATION TABLE (1)

FIG. 4 (A)

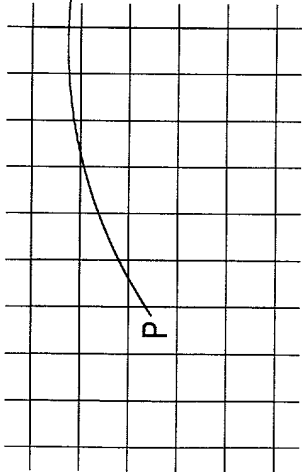
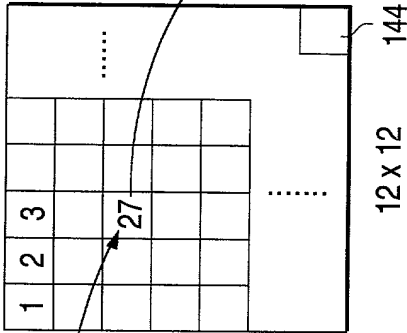


IMAGE DATA

FIG. 4 (B)



PATTERN MATRIX

FIG. 4 (C)

LOOK-UP TABLE GROUP

	INPUT LEVEL				
	0	1	2	.....	255
1	0, PP	0, PP	0, PP		255, PP
2	0, PP	0, PP	0, PP		255, PP
3	0, PP	0, PP	0, PP		255
⋮					
27	0, PP	0, PP	0, PP	.....	255, PP
⋮					
⋮					
144	0, PP	0, PP	0, PP		255, PP

PW, PP

255

144

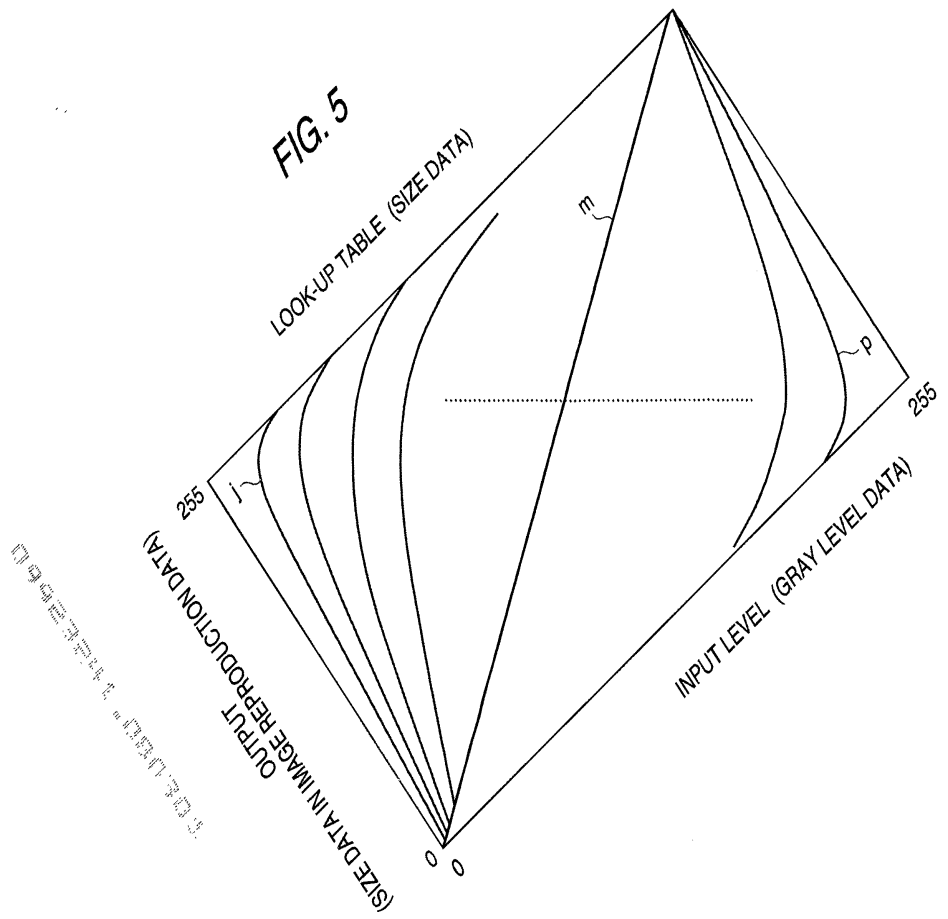
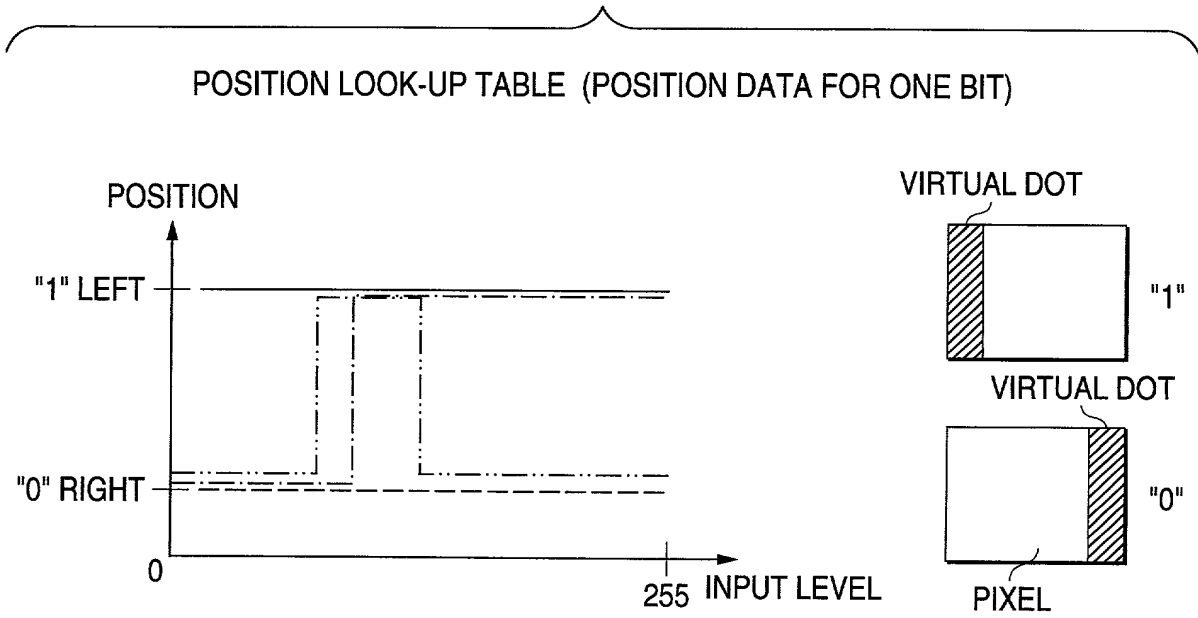
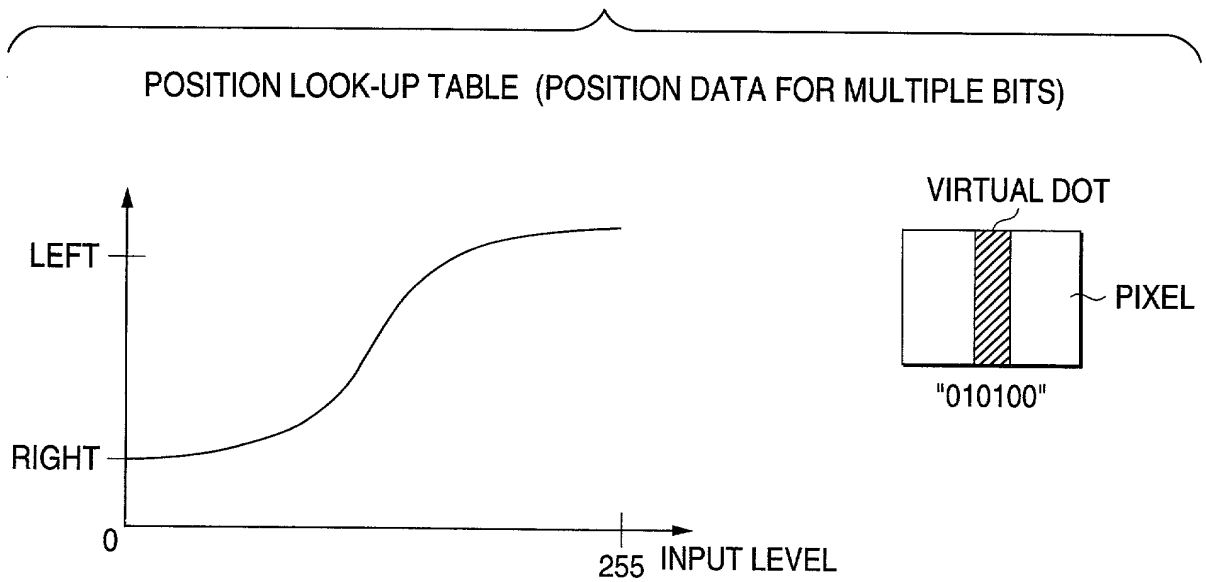


FIG. 6 (A)**FIG. 6 (B)**

INDEX TYPE TRANSFORMATION TABLE

FIG. 8 (B-1)

SIZE PATTERN MATRIX
12 x 12

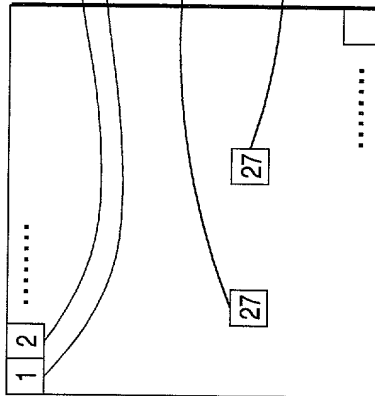


FIG. 8 (C-1)

SIZE LOOK-UP TABLE GROUP

INPUT LEVEL INDEX	0	1	.....	254	255
1	0	18	.....	254	255
.....	0	0	.....	220	255
27	0	0	.....	255	255
.....	0	0	.....	255	255
36	0	0	.....	255	255

FIG. 8 (B-2)

POSITION PATTERN MATRIX
12 x 12

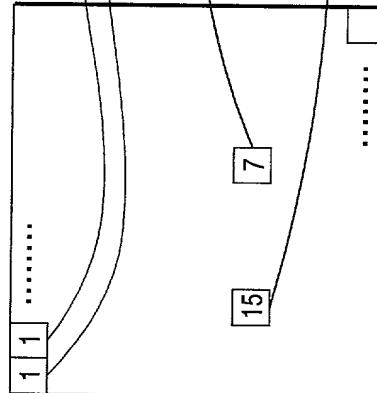


FIG. 8 (C-2)

POSITION LOOK-UP TABLE GROUP

INPUT LEVEL INDEX	0	1	.....	254	255
.....	PP1, PP2	.....	PP254, PP255	.....	PP254, PP255
7	PP1, PP2	.....	PP254, PP255	.....	PP254, PP255
.....	PP1, PP2	.....	PP254, PP255	.....	PP254, PP255
15	PP1, PP2	.....	PP254, PP255	.....	PP254, PP255

FIG. 9

EXAMPLE OF PATTERN MATRIX

D1, 1			D1, 4			D2, 7			D3, 10		
1	2	3	1	4	5	6	7	8	9	4	10
11	12	13	9	14	15	1	6	13	6	7	16
4	8	17	18	12	19	20	5	15	1	14	3
14	21	15	20	16	9	18	22	17	11	16	15
23	10	9	5	3	24	6	10	9	18	8	6
8	25	11	23	10	20	8	3	26	17	21	9
27	15	6	16	28	11	12	2	11	29	3	1
16	9	8	13	15	17	10	26	11	22	17	18
25	20	30	5	6	22	13	24	31	21	26	4
32	33	5	21	4	23	14	4	12	13	1	14
33	4	14	15	17	10	3	4	22	2	11	34
6	7	8	6	35	5	24	36	27	15	20	8

D7, 12

D10, 12

D10, 11

FIG. 10

EXAMPLE OF GROWN HALFTONE SPOTS

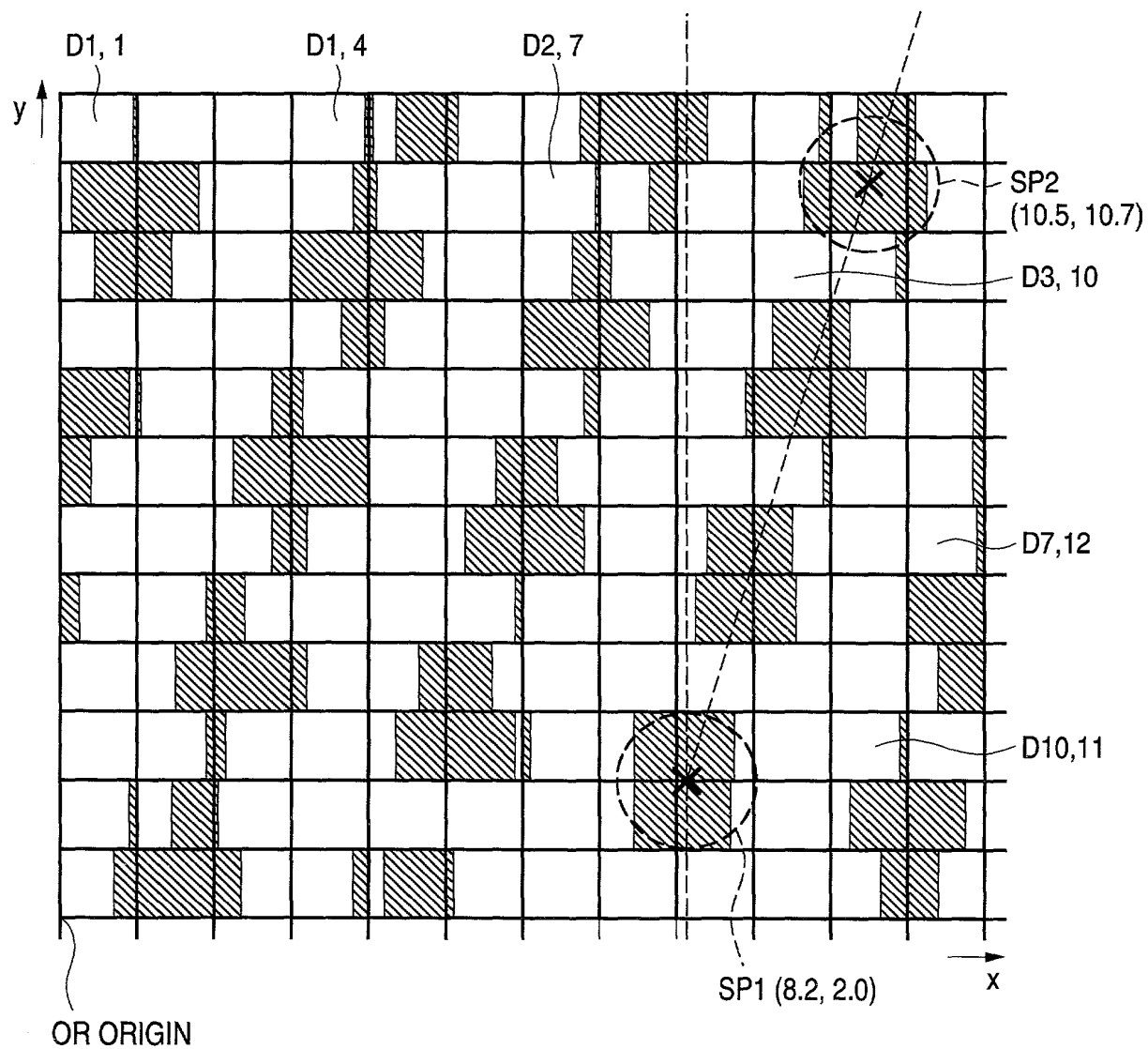


FIG. 11

TRANSFORMATION TABLE FOR THIRD EMBODIMENT

(B) PATTERN MATRIX

D1, 1			D1, 4			D2, 7			D3, 10		
1 PP	2 PP	3 PP	1 PP	4 PP	5 PP	6 PP	7 PP	8 PP	9 PP	4 PP	10 PP
11 PP	12 PP	13 PP	9 PP	14 PP	15 PP	1 PP	6 PP	13 PP	6 PP	7 PP	16 PP
4 PP	8 PP	17 PP	18 PP	12 PP	19 PP	20 PP	5 PP	15 PP	1 PP	14 PP	3 PP
14 PP	21 PP	15 PP	20 PP	16 PP	9 PP	18 PP	22 PP	17 PP	11 PP	16 PP	15 PP
23 PP	10 PP	9 PP	5 PP	3 PP	24 PP	6 PP	10 PP	9 PP	18 PP	8 PP	6 PP
8 PP	25 PP	11 PP	23 PP	10 PP	20 PP	8 PP	3 PP	26 PP	17 PP	21 PP	9 PP
27 PP	15 PP	6 PP	16 PP	28 PP	11 PP	12 PP	2 PP	11 PP	29 PP	3 PP	1 PP
16 PP	9 PP	8 PP	13 PP	15 PP	17 PP	10 PP	26 PP	11 PP	22 PP	17 PP	18 PP
25 PP	20 PP	30 PP	5 PP	6 PP	22 PP	13 PP	24 PP	31 PP	21 PP	26 PP	4 PP
32 PP	33 PP	5 PP	21 PP	4 PP	23 PP	14 PP	4 PP	12 PP	13 PP	1 PP	14 PP
33 PP	4 PP	14 PP	15 PP	17 PP	10 PP	3 PP	4 PP	22 PP	2 PP	11 PP	34 PP
6 PP	7 PP	8 PP	6 PP	35 PP	5 PP	24 PP	36 PP	27 PP	15 PP	20 PP	8 PP

D7, 12

D10, 12

D10, 11

(C) SIZE LOOK-UP TABLE GROUP

INDEX	INPUT LEVEL				
	0	1	2	.....	255
1	0	0	0		255
2	0	0	0		255
3	0	70	95		255
4	0	80	96		255
5	0	0	0		255
⋮					
36					

36

256

FIG. 12

ANOTHER SYSTEM CONFIGURATION

